CanMEDS Rotation Objectives – PEDIATRIC ANESTHESIA  
RCPS Emergency Medicine Residency Program  
Department of Emergency Medicine  
University of Alberta

*While all objectives may not be accomplished in a single rotation, the aim is for the resident to actively seek learning opportunities to fulfill these objectives while on a particular rotation. Many of these objectives will overlap with other rotations. By the end of the residency program, all objectives should be covered.

Medical Expert

The learner should gain knowledge of the following:

- Pediatric airway anatomy, including differences from the adult airway
- Airway management including an approach to the difficult pediatric airway
- Mechanical ventilation, including:
  - Different modes of ventilation
  - Weight-based tidal volumes
  - Age-based respiratory rates
- Pharmacology, indications and contraindications for:
  - Anaesthetic agents
  - Paralytics
  - Inhalational anaesthetics
  - Analgesics
- Fluid resuscitation and basic physiologic differences in the pediatric patient, including blood and blood product administration in the pediatric patient
- Temperature homeostasis
- Management of laryngospasm
- Local and regional anesthetic agents
- NPO regimens
- Out-of-OR issues and management of pediatric patients in these settings

The learner should gain knowledge of, and where applicable, experience in the following technical skills:

- Use of alternative and rescue airway devices (if available), including:
  - Pediatric LMA
  - Illuminated stylet
  - Bougie
  - Glidescope
  - Needle cricothyrotomy and transtracheal jet ventilation
- Invasive monitoring
- Local and regional anaesthetic techniques and procedures

The learner should gain experience in the following technical skills:

- Oral and nasopharyngeal airway device use
- Bag-valve-mask ventilation, including:
  - Selection of appropriately sized mask and bagger
- Ability to bag with age-appropriate rates and volumes
- Endotracheal intubation with and without paralysis, including:
  - Knowledge and use of different laryngoscopy blades
  - Use of cuffed and uncuffed endotracheal tubes
  - LMA’s
- Inhalational inductions
- Vascular access, especially peripheral intravenous cannulation (goal of at least 25 during 4 week block)

**Communicator**
The learner should strive to demonstrate:
- Effective communication with patients and family
- The ability to describe child’s clinical condition to consultants using appropriate terminology
- Accurate and timely record keeping
- Concise and accurate preoperative histories

**Collaborator**
The learner should strive to:
- Recognize the role of other members of the anesthesia and operating suite team
- Interact effectively and respectfully with other team members

**Leader**
The learner should strive to:
- Allocate finite health care resources wisely
- Be capable of planning the equipment and supplies necessary for the pediatric airway
- Manage time efficiently
- Demonstrate team leadership skills

**Health Advocate**
The learner should strive to:
- Advocate appropriately on behalf of patients

**Scholar**
The learner should strive to:
- Critically appraise anesthesia literature, as applicable
- Integrate current literature into daily activities

**Professional**
The learner should:
- Demonstrate integrity and honesty
- Demonstrate compassion and respect in all patient encounters
- Learn and apply ethical principles appropriately
- Be aware of personal limitations and seek assistance when appropriate